The Role of Community-Based Care Capacity in Shaping Risk of Long-Term Care Facility Placement

Le rôle de la capacité de soins communautaires pour faire face aux risques en matière de placement dans les établissements de soins de longue durée



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Abstract

Objectives: Across the developed world, wait lists for facility-based long-term care (LTC) beds continue to grow. Wait lists are primarily driven by the needs of aging populations (demand-side factors). Less attention has been given to system capacity to provide community alternatives to LTC (supply-side factors). We examine the role of both demand- and supply-side factors by comparing the characteristics of individuals who have been assessed and deemed eligible for LTC in urban and rural/underserviced parts of northwestern Ontario, Canada. *Methods:* Home care assessment data were analyzed for all individuals waiting for LTC in northwestern Ontario as of March 2008 (n=858). For the analysis, the sample was separated into urban and rural groups to account for geographical differences in wait list location. Characteristics between these two groups were compared.

Results: Individuals on LTC wait lists in the rural areas were significantly less impaired in activities of daily living and cognition than their counterparts in the urban area. However, in both areas, impairments in lighter-care activities appeared to be a key wait list driver, and few people had an informal caregiver living in the home.

Conclusions: Our data suggest that LTC wait lists reflect, at least to some extent, insufficient community capacity, not just need for LTC.

Résumé

Objectifs: Dans les pays développés, les listes d'attente pour les lits dans les établissements de soins de longue durée (SLD) continuent de s'allonger. Les besoins de la population vieillissante sont les principales causes des listes d'attente (facteurs liés à la demande). On s'est peu intéressé à la capacité du système d'offrir une option communautaire pour les SLD (facteurs de l'offre). Nous examinons le rôle de ces deux types de facteurs (demande et offre) en comparant les caractéristiques des individus qui ont été évalués et jugés admissibles pour les SLD dans des régions urbaines et rurales/mal desservies du nord-ouest ontarien, au Canada. *Méthodes:* Nous avons analysé les données sur l'évaluation pour les soins à domicile de toutes les personnes inscrites sur les listes d'attente pour des SLD dans le nord-ouest ontarien depuis mars 2008 (n=858). Pour l'analyse, l'échantillon a été divisé en groupes urbain et rural, afin de tenir compte des différences géographiques dans les listes d'attente. Nous avons comparé les caractéristiques entre ces deux groupes.

Résultats: Les personnes inscrites sur les listes d'attente pour des SLD dans les régions rurales étaient nettement moins déficientes pour ce qui est des activités quotidiennes et cognitives que leurs homologues des régions urbaines. Cependant, dans les deux types de régions, les déficiences liées aux activités de soins légers semblent être une des causes clés des listes d'attente, et peu de personnes bénéficient de la présence à domicile d'un soignant naturel.

Conclusion : Nos données laissent voir que les listes d'attente pour les SLD reflètent, du moins en partie, une insuffisance de la capacité communautaire, et non pas uniquement les besoins en SLD.

ANY OLDER PERSONS, IN BOTH URBAN AND RURAL COMMUNITIES, WISH TO AGE in their own home and avoid, or delay, placement into a long-term care (LTC) facility (Pedlar and Walker 2004). There is evidence that home and community care (H&CC) may be more cost-effective than facility-based LTC except for individuals with unstable care needs (Hollander and Chappell 2007). Reflecting this situation, public policies emphasizing "deinstitutionalization" have been implemented across the developed world (Johri et al. 2003). Nevertheless, in jurisdictions like Ontario, Canada's most populous province, facility-based LTC wait lists persist. While wait lists have been seen as evidence of too few facility-based LTC beds to meet the needs of an aging population, wait lists may also show that there are insufficient community-based care options (Challis and Hughes 2002; Williams, Challis et al. 2009).

In this paper we examine the role of H&CC in determining the likelihood that individuals at similar levels of need will be placed on facility-based LTC wait lists. We do this by comparing the characteristics and needs of individuals who have been assessed and deemed eligible for facility-based LTC in two geographical areas of northwestern Ontario: an urban area (Thunder Bay), characterized by a relatively well-developed H&CC infrastructure; and a rural and remote area (the Region), characterized by long distances, low population density and few H&CC providers and services. Minimizing the likelihood that any observed variation will be due to differences between referral sources, in both areas individuals are placed on the facility-based LTC wait list by trained care managers employed by the same Community Care Access Centre (CCAC). CCACs are provincially funded home care organizations, all of which use a standardized assessment tool and standard eligibility criteria when making LTC facility placement decisions. These criteria explicitly recognize that placement may result from individual need (e.g., a high level of cognitive or functional impairment) or from a lack of suitable care alternatives in the community (e.g., home care). All assessments are completed by a CCAC care manager, who visits the individual in his or her place of residence to conduct the assessment.

Accordingly, in this paper we argue that in rural and remote areas, where H&CC capacity is more limited, the needs threshold or "tipping point" for facility-based LTC placement will be lower, with proportionately more individuals slated for facility-based LTC even at relatively low levels of need. Conversely, in urban areas, where H&CC is more accessible, individuals with higher levels of need may be more likely to age at home. This hypothesis is consistent with the literature, which suggests that H&CC capacity may be especially limited in rural and remote areas due to distance (Sims-Gould and Martin-Matthews 2008), low population density and a lack of service infrastructure (Bolin et al. 2006), including shrinking informal support networks (i.e., family and friends who leave rural areas to secure employment in more prosperous urban areas) (Skinner et al. 2008). As a result, the risk of institutionalization may increase outside urban centres (Bolin et al. 2006).

We begin by briefly reviewing factors seen to influence the risk of LTC facility placement, and then give a short summary of Ontario's healthcare system, which has historically embedded incentives towards facility-based care. We then describe our data and methods, and present and discuss our findings.

Facility-Based Long-Term Care: Definition and Risk Factors

In Ontario, facility-based LTC has typically been seen as geared to individuals with high needs requiring assistance with instrumental activities of daily living (ADLs) such as toileting and personal hygiene, rather than to individuals with lower needs requiring assistance with instrumental IADL, including housekeeping and transportation.

The research literature on LTC facility risk factors has also tended to focus on demand-side factors related to the care needs of individuals. Demand-side factors that place individuals at risk of long-term care are numerous but typically include age (Tomiak et al. 2000), ADL impairments (Gaugler et al. 2007), cognitive impairments (Andel et al. 2007) and IADL impairments (Andel et al. 2007). Some factors are more salient than others. For example, a US-based meta-analysis outlined that three or more ADL impairments and cognitive impairment were among the strongest predictors of nursing home admission (Gaugler et al. 2007).

One series of studies focusing on supply-side factors determined the extent to which individuals, residing in or at risk of facility-based LTC, can age at home if given access to H&CC (Hughes and Challis 2004). Challis and Hughes (2002) found that up to 36% of individuals residing in LTC facilities in one community in the United Kingdom could potentially have aged at home at a similar or lower cost if given access to needed H&CC. These individuals were characterized by low levels of functional and cognitive impairment, and had an informal caregiver in their home (i.e., a family member of the care recipient). Given such low impairments, these individuals were deemed to be the least appropriately placed. Similar studies conducted in different regions of Ontario have demonstrated that between 14% and 49% of individuals wait-listed for facility-based LTC could potentially age at home, safely and at a lower cost than facility-based LTC, if given access to H&CC, including supports for IADLs. Similar to Challis's study, most of the individuals who were deemed fit to be taken off the wait list had low levels of cognitive and functional impairments. Access to an informal caregiver in the home varied and became increasingly important when functional and cognitive impairments increased (Williams, Challis et al. 2009).

Thus, in addition to individual needs, there is evidence that the supply side is itself an important determinant of institutionalization. And unlike population aging, which occurs naturally, decision-makers have considerable scope to alter supply-side variables through policies that make facility-based LTC beds and H&CC more or less accessible. Below, we analyze key policies that have set the balance between institutional and community-based resources for older persons in Ontario.

The Case of Ontario

Canada (much like other developed countries) has a healthcare "system" that spans a range of services provided in different settings (including hospitals, doctor's offices, LTC facilities and the home). However, while Canada's system of publicly funded, universal health insurance (medicare) affords universal coverage for medically necessary physician and hospital services for all insured persons, both facility-based LTC and H&CC fall outside of medicare's protected

entitlements. Because the responsibility for the financing and delivery of healthcare resides at the provincial level, this situation has resulted in considerable variation beyond medicare's institutional boundaries in terms of which services are publicly available, to whom and in what quantity (Randall and Williams 2006). Although provinces have chosen to provide some array of home care services at no cost to individuals who meet eligibility criteria (Coyte and McKeever 2001; Canadian Home Care Association 2008a), coverage varies considerably between and within provinces. While all provinces and territories provide some level of publicly funded services including case management, nursing and personal care services, other services including nurse practitioner care, pharmaceutical coverage, speech-language pathology, occupational and physiotherapy vary in availability and coverage (Canadian Home Care Association 2008a). In addition, some of these services are more difficult to access in rural and remote regions compared to urban centres, creating further fragmentation (Canadian Home Care Association 2008b).

In Ontario, a historical policy emphasis on institutionally based, hospital-centred acute and episodic care has done little to address the needs of a growing number of older persons and caregivers experiencing multiple, chronic health and social needs. Ironically, this has led to growing numbers of costly in-patient beds being occupied by individuals, including many older persons, who do not require acute care. However, programs and services beyond the hospital's walls continue to be fragmented, and efforts to integrate the disparate health and social care sectors to better serve older persons and increase health system efficiency have been incremental (Kodner and Spreeuwenberg 2002).

During the mid-1990s, Ontario established a system of 43 (subsequently restructured to 14) geographically based Community Care Access Centres (CCACs). These are publicly funded agencies that purchase H&CC on a competitive basis from not-for-profit and commercial providers on behalf of individuals requiring care. However, following a series of budget constraints in the early 2000s, care has been increasingly limited to professional and personal supports for individuals, including an increasing proportion of post–acute care patients who demonstrate a high level of need (Daly 2007). While CCACs charge no user fees, and while all individuals requesting services are assessed, there is no entitlement to services. In other words, individuals may not qualify for services following assessment.

In addition to CCACs, a constellation of hundreds of locally based, mostly not-for-profit volunteer-driven community support agencies provide a range of transportation, day programs, respite care, meals on wheels and other, lighter supports. While many services are partly or wholly funded by government, these agencies may charge user fees scaled to the recipient's income. There is little consistency in the scope and availability of community support services between and within provinces, because agencies tend to develop from the "ground up." What is more, community support agencies in Ontario lack a central access point, making it difficult for individuals to navigate services and mobilize care (Denton et al. 2008). While CCAC care managers can recommend clients to community support agencies, there is no mechanism to coordinate services between CCACs and the myriad community support agencies, even though many older persons with multiple morbidities require both (Williams, Challis et al. 2009).

Such discontinuities in access to H&CC were further complicated by a provincial decision in 2000 to build and restore 20,000 LTC facility beds. In a review conducted by Coyte and colleagues (2002), this number was questioned given that other factors, such as client preference and compression of morbidity, were excluded from the calculation.

More recently, in 2007, Ontario introduced a multi-year, billion-dollar Aging at Home Strategy (MHLTC 2007) aimed at supporting older persons to "age in place" both to enhance their well-being and to achieve more cost-effective care alternatives. However, under conditions of fiscal constraint, and growing pressures on hospital beds, emphasis has subsequently shifted away from Aging at Home's initial focus on prevention and maintenance, to facilitating the quicker discharge of hospital patients. In 2009, a proportion of Aging at Home's funding was earmarked to address the alternate level care (ALC) and emergency room issues in hospitals (MHLTC 2009). ALC refers to medically unnecessary hospital utilization among individuals who are unable to receive support elsewhere (Walker 2011). This policy shift can be described colloquially as moving from "aging at home" to "not aging in hospital." As a result of such policy decisions, access to needed H&CC in Ontario remains fragmented, uneven and often inadequate. In rural and remote communities, long distances, sparse populations and little H&CC infrastructure present additional barriers to access.

Supply-Side Issues in Northwestern Ontario

While not all rural and remote communities are "resource poor" (Keating and Phillips 2008), a large body of evidence suggests that rural and remote populations (as a whole) tend to have greater needs and face greater barriers to accessing care than their urban counterparts (Canadian Homecare Association 2006, 2008b).

One important exception may be the supply of LTC facility beds; rural and remote areas have been described as relatively over-bedded on a population basis (Rosenthal and Fox 2000; Waterloo Wellington LHIN 2010). While few definitive connections have been demonstrated in the literature, some observers have suggested that limited access to H&CC, combined with a greater supply of LTC facility beds, may place rural and remote populations at increased risk of LTC facility placement (Coward et al. 1994). No recent papers could be located that examine this effect; thus, our study seeks to fill this gap.

Northwestern Ontario is primarily a rural and remote region and as such, exhibits many such characteristics. On the demand side, residents of northwestern Ontario demonstrate a higher prevalence (compared to Ontario as a whole) of poor health practices (e.g., smoking and alcohol use) and higher rates of overweight and obesity, all key risk factors for chronic disease. Rates of chronic disease, including diabetes and heart disease, are greater, life expectancies are lower, and greater activity limitations are experienced (North West LHIN 2010).

On the supply side, northwest Ontario suffers from physician shortages (Kelley et al. 2008), emergency services backlogs and wait lists for facility-based LTC. However, the data confirm that northwestern Ontario has a greater supply of facility-based LTC beds per capita than the rest of Ontario (North West LHIN 2006).

There are also important differences between Thunder Bay and the Region.

Residents of the Region have a poorer population health record and have less access to services in the community compared to residents in Thunder Bay (MHLTC n.d.; Statistics Canada 2010).

If supply-side factors do affect placement decisions, we would expect that individuals at similar levels of need living in Thunder Bay with comparatively better access to needed H&CC would be less likely to be placed on LTC facility wait lists than those living in rural and remote areas, where H&CC is less readily available.

Materials and Methods

Ethical approval

The study reported in this paper was approved by the University of Toronto Ethics Review Board on December 21, 2007.

Study setting

The study took place in northwestern Ontario, a geographical area that covers almost half of the province. At 458,010 square kilometres, northwestern Ontario is nearly twice the size of the United Kingdom. This vast land mass contains one urban area (Thunder Bay) with a population of over 100,000, and several rural communities made up of populations of less than 10,000 (the Region).

Design

The method used in this research was a cross-sectional retrospective analysis of Resident Assessment Instrument for Home Care (RAI-HC) data housed at the North West Community Care Access Centre (CCAC). The RAI-HC has been used since 2002 in Ontario by CCAC care managers to guide decision-making regarding eligibility for long-stay home care services and facility-based LTC (Hirdes et al. 2008). The RAI-HC collects information on factors including demographics, functionality, cognitive capacity, disease diagnoses, emotional well-being, social support, behavioural issues, medications and service utilization. All individuals in our sample were assessed in person by a care manager from the North West CCAC.

Sample

The most up-to-date assessment data for individuals wait-listed for facility-based LTC (n=858) as of March 18, 2008 were used for the analysis.

Variables

In order to conduct geographical comparisons, we followed Statistics Canada's definition of rural and small towns, which identifies the latter as "towns or municipalities outside the commuting zone of larger urban centres (with 10,000 or more population)" (du Plessis et al. 2001: 6). We then used the first three digits of "Postal Code of Residence" (Section 4AA from the

RAI-HC) to determine where individuals lived. Wait-listed individuals were then separated into urban (i.e., Thunder Bay; n=475) and rural (i.e., the Region; n=383) categories.

Four variables of individual need were used: ADL impairment derived from the ADL Hierarchy Scale (a measure of mobility, eating performance, toileting and personal hygiene activities); IADL impairment derived from the IADL Difficulty Scale (a measure of ability to prepare meals, engage in light housekeeping and phone use); cognition derived from the Cognitive Performance Scale (CPS; a measure of short-term memory, ability to understand others, decision-making capacity and eating self-performance); and presence of an informal caregiver in the home. In addition to being key risk factors for facility placement, these variables had been used in a similar research study in Ontario (Williams, Lum et al. 2009). The validity of the above-mentioned scales has been noted in previous papers (Morris et al. 1994, 1999). To give more background information for our samples, we provide demographics (gender, language and marital status). Age, education and place of residence at time of referral were other variables of interest but were excluded from the analysis. The removal of the variable age from the data set was an ethics requirement, while education and place of residence during referral had missing data (62% and 40% of missing responses, respectively). After excluding these latter variables, there were no missing data among the variables used in our analysis.

Data preparation and analysis

Prior to receiving the data, they were stripped of all personal identifiers (name, health card number, age and last three digits of postal code). Using SPSS version 18, we conducted both parametric and non-parametric tests. The dependent variables (and ADL, IADL and CPS scale scores) were not normally distributed within both of the samples (urban and rural), thus the Mann-Whitney Test provided a more robust measure than the t-test. The comparison of the medians of the samples (as opposed to the mean) is less sensitive to outliers, and subsequently provides a more robust measure for our data. The chi-square test was used for the final variable in our analysis (presence of a caregiver in the home). During the analysis no cells had an expected count of less than five, thus, the assumption of this test was not violated.

Results

Individuals wait-listed in Thunder Bay and the Region had similar background characteristics (Table 1). In both urban and rural samples approximately two-thirds were female (64% and 67%), over half were widowed (52% and 56%) and almost all spoke English as their first language (86% and 94%). A significant difference was found between urban and rural samples on the number that spoke English as their first language ($X^2=13.142$; p=.001).

Cognition (Cognitive Performance Scale)

From Table 2 we observe that individuals waiting for LTC facility placement in Thunder Bay were more likely to be cognitively impaired than their counterparts in the Region. The test results suggest that there is a statistically significant difference in CPS scores for individuals

wait-listed in Thunder Bay and those wait-listed in the Region (z=-6.664; p=.001). Despite these differences, large numbers of wait-listed individuals in Thunder Bay (49%) and the Region (72%) experienced only mild levels of cognitive impairment.

TABLE 1. Background characteristics

	Thunder Bay (Urban) n=475		Region (Rural) n=383	
	N	%	N	%
Gender				
Male	171	36	128	33
Female	304	64	255	67
Marital Status				
Never Married	48	10	24	6
Married	142	30	128	33
Widowed	245	52	214	56
Separated	10	2	5	1
Divorced	23	5	10	3
Other	7	I	2	I
Primary Language ^a				
English	409	86	359	94
Other	66	14	24	6

 $^{^{\}rm a}$ p-Values for all variables < .00 I

Activities of daily living impairment (ADL Hierarchy Scale)

Individuals wait-listed in Thunder Bay were also more likely to be impaired in ADL compared to their counterparts from the Region. The test results show a statistically significant difference in ADL scores among individuals wait-listed in Thunder Bay and those wait-listed in the Region (z=-9.777; p=.001). However, we once again observe that many individuals on both the Thunder Bay wait list (65%) and the Region wait list (83%) experienced relatively limited ADL impairment.

Instrumental activity of daily living impairment (IADL Difficulty Scale)

Individuals wait-listed in Thunder Bay were also more likely to be impaired in (IADLs than their counterparts from the Region; this difference is also statistically significant (z=-8.649; p=.001). Note that in contrast to their relatively low levels of cognitive and ADL impairment, many of those in both Thunder Bay (80%) and the Region (50%) experienced difficulty with at least one IADL.

Presence of a caregiver in the home?

No differences were observed between Thunder Bay and the Region when we examined whether or not a caregiver was available in the home of the care recipient (X^2 =0.299; p=.585). The majority of individuals in Thunder Bay (63%) and the Region (65%) did not live with a caregiver.

TABLE 2. Characteristics of wait-listed individuals by geographic region in northwestern Ontario

		Thunder Bay (Urban) n=475		Region (Rural) n=383	
	N	%	N	%	
Cognitive Performance Scale ^a (0–6) Intact Borderline Intact Mild Impairment Moderate Impairment Moderate–Severe Impairment Severe Impairment Very Severe Impairment	87 69 78 188 28 22 3	18 14 16 40 6 5	137 55 82 83 7 16	36 14 21 22 2 4	
Mean Median Standard Deviation	2.17 3.00 1.416		1.55 1.00 1.473		
Activity of Daily Living Impairment* (0–6) Independent Supervision Required Limited Impairment Extensive Assistance Required Ib Extensive Assistance Required IIc Dependent Totally Dependent	133 106 68 73 38 49 8	28 22 14 15 8 10 2	248 32 36 41 12 11	65 8 9 11 3 3	
Mean Median Standard Deviation	ı	1.91 1.0 1.736		0.91 0 1.451	
Instrumental Activity of Daily Living Impairment ^a (0–6) No Difficulty in Any IADLs Some Difficulty in One Some Difficulty in Two Some Difficulty in All Three Great Difficulty in Two Great Difficulty in Two Great Difficulty in All Three	2 6 31 55 150 103 128	.4 7 12 32 22 27	12 26 66 88 83 48 60	3 7 17 23 22 13	
Mean Median Standard Deviation	4	4.45 4.00 1.284		3.54 3.00 1.604	
Presence of a Caregiver in the Home? Yes No	135 248	37 63	176 299	35 65	

^a p-Values for all variables < .00 l

Refer to page 100 for a description of all of the scales.

Discussion

Four key observations emerged from our analysis.

First, individuals wait-listed for LTC in the Region experienced lower levels of functional and cognitive difficulties compared to those in Thunder Bay, suggesting a lower needs "tipping point" for referral to facility-based LTC outside the urban area.

^b At least extensive assistance in personal hygiene and toileting and less than extensive assistance with both eating and locomotion in the home

 $^{^{\}mbox{\tiny c}}$ Extensive assistance in eating or locomotion (total dependence in neither of the two)

Second – and despite this clear geographical difference – many individuals (up to one-third and one-half of the wait list populations in both Thunder Bay and the Region, respectively) exhibited relatively minor levels of functional and cognitive impairment.

Third, "lighter care" or IADL needs emerged as a potential wait list driver. Mirroring trends among wait list populations across Ontario (Williams, Challis et al. 2009), a high prevalence of IADL impairment was observed in both Thunder Bay and the Region. Almost all wait-listed individuals in both areas had at least some difficulty with IADLs (housekeeping, meal preparation and phone use). As a consequence of funding constraints and resource allocation decisions, there is little access to H&CC services for individuals who exhibit IADL needs but not ADL or cognitive impairments. IADL supports are provided by mostly local, charitable grassroots organizations, where availability varies considerably, and there is only minimal access to these services in rural and remote regions. Moreover, as noted, the CCAC, which conducts assessments and manages LTC facility wait lists, did not provide access to IADL services at the time of this analysis (although changes to provincial regulations have subsequently allowed them to do so, within budget constraints). While facility-based LTC may be aimed at individuals requiring 24-hour monitoring, data from our study and other Ontario-based studies suggest that in the absence of needed "lower-level" community supports (e.g., housekeeping and meal preparation), placement on a LTC wait list may become the "default option" (Williams, Kuluski et al. 2009). Although this appears to be an interesting emerging trend, further research would be required to make a definitive linkage.

Fourth, few wait-listed individuals in Thunder Bay or the Region had live-in caregivers (i.e., family members and friends) – a situation that, according to the literature, increases the risk of LTC facility placement (CIHI 2007). This finding highlights a growing challenge for rural and remote communities: shrinking informal caregiver networks. Historically, it has been assumed that strong social networks serve to compensate for a lack of formal services in rural and remote communities. However, this is increasingly less true as more young adults seek education and work opportunities in urbanized areas (Skinner et al. 2008) and as older persons wish to retire in rural and remote areas. Older persons in rural and remote areas may thus face a double burden characterized by inadequate formal services and declining informal care networks. While targeted at "high-needs" individuals, particularly in rural and remote areas, facility-based LTC may in fact become a substitute for "lower-level" care.

Limitations

This research focuses on one particular setting/jurisdiction, which may limit the generalizability of our findings. Future research that underpins such urban and rural distinctions in wait list placement thresholds is required. Previously conducted research in this area does, however, support our notion that greater supply of H&CC may lead to lower placement risk. For example, Toronto, Ontario – a more quintessentially urban centre compared to Thunder Bay, having a greater array of home supports – had individuals waiting for long-term care with

higher levels of ADL, IADL and cognitive impairment than those on both the wait list in Thunder Bay and in the Region (Williams, Challis et al. 2009).

We also had limitations within our data. For example, additional demographic data (age, education and place residence during referral) would have provided greater insight into the differences between the urban and rural wait lists and assisted in the interpretation of the findings. For instance, age is a significant risk factor for placement and perhaps played a role in shaping risk of placement, particularly in rural areas. Further, our data set limited our ability to conduct more advanced statistical modelling. Access to non—wait-listed populations who had been assessed by the RAI-HC would have strengthened our analysis by allowing us to examine risk of wait list placement through a multiple regression. Further, having access to data among individuals in facility-based LTC would have allowed us to predict actual placement. The data presented in this paper were limited to individuals assessed and deemed eligible for facility-based LTC.

Also, we were unable to detect through our data other factors that may have affected decision-making among care managers who place individuals on wait lists, even though they are mandated to follow specific criteria in determining placement eligibility. For instance, one may argue that occupancy on a wait list can occur as a form of "insurance policy" or anticipation of future need. Further analysis will be required to fully understand the placement decisions that are made by care managers across urban and rural settings, and the subsequent implications of these decisions.

Conclusions

We conclude that both the existence and volume of wait lists may inflate the demand for facility-based LTC. Given historical policy trends in Ontario, such high demand for facility-based LTC may lead to policy decisions in favour of more beds, as opposed to a more balanced investment between facility care and home care.

Where H&CC is more readily accessible, the needs threshold or "tipping point" for referral to facility-based LTC appears to be higher; conversely, where H&CC is less accessible, facility-based LTC may become the default option. As a result, our data show that in rural and remote communities, where H&CC is particularly constrained, individuals are referred to facility-based LTC at lower levels of need.

Based on these findings, we caution that LTC facility wait lists should not be taken as an indication of a need for more institutional LTC beds. Facility-based LTC beds are definitely required, if not necessary, for a proportion of the population; however, our study suggests that one needs to be critical when trying to understand the meaning of a wait list. It should be recognized that any wait list for a service might reflect, in part, constraints in other sectors, that is, spillover effects. Such considerations will allow policy makers to make informed choices regarding cost-effective investments, while simultaneously meeting the preferences and needs of a growing population of older persons.

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